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EXAMINER
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DATE MAILED:
08/27/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined   ☐ Responsive to communication filed on_____   ☐ This action is made final.

A shortened statutory period for response to this action is set to expire ___3___ month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I   THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☑ _substitute form 210 - 948_

Part II   SUMMARY OF ACTION

1. ☑ Claims _____ 1 - 26 _____ are pending in the application.

   Of the above, claims _____ None _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☑ Claims _____ 22, 24, 25, and 26 _____ are allowed.

4. ☑ Claims _____ 1, 5, 6-8, 13-15, 17, and 20 _____ are rejected.

5. ☑ Claims _____ 2-4, 9-12, 16, 18, 19, 21, and 23 _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☑ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☑ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings
   are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the
   examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
   ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in
   accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

Drawings

1.   This application has been filed with informal drawings which are acceptable for

examination purposes only. Formal drawings will be required when the application is allowed.

See PTO Substitute Form-948 attached.

Specification

2.   The use of the trademarks UNIX, Windows or Windows NT, Macintosh, Motorola, Intel

Pentium have been noted in this application, see for example pages 7 and 10. They should be

capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary

nature of the marks should be respected and every effort made to prevent their use in any manner

which might adversely affect their validity as trademarks.

Claim Objections

3.   Claims 7, 15, 19, and 23 are objected to because of the following informalities:

As per claims 7 and 19, line 2, the preposition "in" seems inappropriate in the sentence.

Please replace this preposition by the indefinite article "a" or provide an explanation.

As per claim 15 line 2, the word "uuencoded" is a typo; it should be corrected to read "unencoded".

As per claim 23, line 2, the preposition "in" after the word "using" should be deleted. Appropriate correction is required.

Allowable Subject Matter

4.   Claims 2-4, 9-12, 16, 18, 19, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per claims 2-4, 11, and 12, the prior arts do not teach, singly or in combination, that the server is a proxy server nor do they teach a FTP or SMTP proxy server to handle evaluation and transfer of data files. The prior arts also fail to teach a daemon for transferring data from the proxy server wherein the daemon is an FTP or SMTP daemon.

As per claims 9 and 10, The prior arts fail to teach, singly or in combination, the step of determining whether the data is of a type and transmitting the data from the server to the destination without performing the steps of scanning, determining, performing and sending, if the data is not of a type that is likely to contain a virus.

As per claim 16, the prior arts fail to teach, singly or in combination, that the server includes a SMTP proxy server and a SMTP daemon.

As per claims 18, 19, and 21, the prior arts fail to teach, singly or in combination, the

steps of storing each encoded portion of the mail message (data) in a separate file; decoding the

encoded portions of the data (mail message) to produce decoded portions of the mail message;

and scanning each of the decoded portions for a virus. Claim 21 is dependent on claim 18.

5.   As per claim 23 is objected to because of a minor mistake, but would be allowable if

rewritten to correct the mistake, see supra paragraph 3.

6.   Claims 22, 24, 25, and 26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As per claims 22, 24, 25 and 26, the prior arts taken singly or in combination fail to teach

equivalent means, as disclosed in the application at bar, to carry out the claimed invention. For

example, in independent claim 22, the present invention calls for a means for determining

whether the data contains a virus at the server. This means, as disclosed in the specification, is

the FTP proxy server or the SMTP proxy server. The prior arts fail to teach these particular

means or equivalent means to do the same; therefore, the examiner favors the allowance of these

claims (id).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

8.   Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lerche et al. United States Letters Patent No. 5,511,163 in view of Hile et al. United States Letters Patent No. 5,319,776.

As per claim 1:

Lerche et al. substantially teach the claimed system for detecting viruses in data transfers, the system comprising:

a)   a memory for storing data and routines, see the teachings by Lerche et al. regarding the personal computer, fig. 1. In the memory is stored a virus scan program to scan the transferred data for virus infection;

b)   a communications unit for receiving and sending data, figure 2--the Token-Ring adaptor. The Token-Ring adaptor has an input and an output;

c)   a network adapter to receive information on the network. "The network adaptor is connected to a computer [processing unit] which together with the adaptor can perform an assembling and scanning of substantially all files on the network and carry out a recognition of virus signatures." Emphasis added. If a virus signature is detected in a file, information is simultaneously provided on the transmitting stations and the receiving stations and an alarm is activated, whereby a further spreading of the virus can be prevented.

Although, Lerche et al. teach scanning for viruses in transferred data, Lerche et al. do not explicitly disclose selectively transferring data depending on the existence of viruses in the data being transmitted.

However, Hile et al. in an analogous art teach that when a virus is detected, the virus detection function inform the user that a virus has been detected and gives the user the option to cancel the transfer--suggesting selectively transferring a file or not.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the virus detection system as disclosed by Lerche et al. by including means and step to selectively transfer data. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Hile et al., to give the user the option to cancel the transfer of a file or data that is found to be infected with a virus.

9.   Claims 5, 6-8, 13-15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hile et al. United States Patent No. 5,319,776 in view of Lerche et al. United

States Letters Patent No. 5,511,163.

As per claim 5:

Hile et al. substantially teach the claimed computer implemented method for detecting

viruses in data transfers between a first computer and a second computer, see fig. 1. The method

comprising the step of : electronically transmitting data, col. 4, lines 1-2; determining whether

the data contains a virus, col. 4, lines 7-8; performing a preset action on the data if the data

contains a virus, col. 4, lines 16-22; allowing the delivery of the data if no virus is detected, see

col. 4, lines 22-26.

Hile et al. do not explicitly disclose that the data is sent to a destination address, nor the

use of a server to carry out the above cited functions (id).

However, Hile et al. teach that the invention is applicable to a network, see the abstract.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the

invention was made to modify the method disclosed by Hile et al. by including a destination

address with each piece of data sent over the network. This modification would have been

obvious because a person having ordinary skill in the art would have been motivated to do so

since the use of destination address is well known in network routing. Moreover, Hile et al.

suggest that the disclosed invention is applicable to network.

Furthermore, Lerche et al. in an analogous art teach the use of the server to carry out the

function of scanning transferred data or file and detecting virus if present, see col. 1, lines 19-30;

col. 2, lines 57-60; figure 4. Therefore, it would have also been obvious to a person having

ordinary skill in the art at the time the invention was made to modify Hile et al.'s method by

providing a server to carry out the functions of determining whether the data in a transferred file

contains a virus or not. This modification would have been obvious because a person having

ordinary skill in the art would have been motivated by the teachings and suggestions by Hile et

al. --"Data is tested in transit between a source medium and a destination medium, such as

between two computers communicating over a telecommunications link or network"; and as

suggested by Lerche et al. that the network server can include virus program to perform a virus

scan.

As per claim 6:

This claim is rejected under the same rationale as discussed above with regards to claim

5. Further, Hile et al. teach storing the incoming transferred data into a temporary file, see '776,

col. 4, lines 7(the input buffer).

As per claim 7:

Both references (Hile et al. And Lerche et al.) teach the step of scanning is performed

using a signature scanning process, see '776, col. 4, lines 6-22 and passim; also '163, col.1, lines

44-48.

As per claim 8:

Hile et al. teach that one of the preset action after the scanning step is to transmit or receive the message when no virus is detected or, for example, not allowing the data to be stored (transmission not complete); see col. 4, lines 16-26; col. 7, lines 3-6 and passim.

As per claim 13:

Hile et al. substantially teach the claimed computer implemented method for detecting viruses in data transfers between a first computer and a second computer, see fig. 1. The method comprising the step of : electronically transmitting data, col. 4, lines 1-2; determining whether the data contains a virus, col. 4, lines 7-8; performing a preset action on the data if the data contains a virus, col. 4, lines 16-22; allowing the delivery of the data if no virus is detected, see col. 4, lines 22-26.

Hile et al. do not explicitly disclose that mail message (data) are sent to a destination address, nor the use of a server to carry out the above cited functions (id).

However, Hile et al. teach that the invention is applicable to a network, see the abstract. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Hile et al. by including a destination address with each piece of data send over the network. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so since the use of destination address is well known in network routing. Moreover, Hile et al. suggest that the disclosed invention is applicable to network.

Furthermore, Lerche et al. in an analogous art teach the use of the server to carry out the

function of scanning transferred data or file and detecting virus if present, see col. 1, lines 19-30;

col. 2, lines 57-60; figure 4. Therefore, it would have also been obvious to a person having

ordinary skill in the art at the time the invention was made to modify Hile et al.'s method by

providing a server to carry out the functions of determining whether the data in a transferred file

contains a virus or not. This modification would have been obvious because a person because a

person having ordinary skill in the art would have been motivated by the teachings and

suggestions by Hile et al. --"Data is tested in transit between a source medium and a destination

medium, such as between two computers communicating over a telecommunications link or

network"; and as suggested by Lerche et al. that the network server can include virus program to

perform a virus scan.

As far as the mail message is concerned, Hile et al. do not explicitly disclose that the data

is mail message, nor that the step of determining whether a mail message contains a virus is

performed by scanning the mail message for encoded portions. However, it would have been

obvious to a person having ordinary skill in the art at the time the invention was made to modify

Hile et al.' s system by applying the method to data to be transferred which is "mail message".

This modification would have been obvious because a person having ordinary skill in the art

would have been motivated to do so in order to stop the spread of virus through the mail system

in a network.

As per claim 14:

Hile et al. teach scanning the data to detect if a virus exist. Hile et al. do not explicitly disclose that the data is mail message, nor that the step of determining whether a mail message contains a virus is performed by scanning the mail message for encoded portions. However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Hile et al.' s system by applying the method to data to be transferred which is "mail message". This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so in order to stop the spread of virus through the mail system in a network.

As far as scanning the encoded portion of the mail message, Lerche et al. in an analogous art teach that because a virus is structured like a program which is encoded in hexadecimal code, it can be recognized by comparing the program with program signature. Therefore, It would have also been obvious to a person having ordinary skill in the art a the time the invention was made to modify the method as disclosed by Hile et al. to scan for encoded portions of the data (mail message). This modification would have been obvious to a person having ordinary skill in the art since it is suggested by Lerche et al. ---" a program comprises a number of commands to an electronic data processing system. The commands are encoded in hexadecimal codes easy to recognize. In this manner it is possible to compare the program with program signatures in order to ensure that said program signature is in fact a portion of the complete program. A virus is in fact a program and can therefore be recognized in the same manner." '163, col. 3, lines 11-24.

As per claim 15:

Lerche et al. teach (col. 3, lines 10-24) that the unencoded portions of the file is searched, see specifically col. 3, lines 20-21.

As per claim 17:

Hile et al. teach storing the data in a temporary file, scan the temporary file for virus, and determine if a virus is present or not, see col. 4, lines 7-26 et seq.

As per claim 20:

Hile et al. teach that one of the preset action after the scanning step is to transmit or receive the data (mail message) when no virus is detected or, for example, not allowing the data to be stored (transmission not complete); see col. 4, lines 16-26; col. 7, lines 3-6 and passim.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1.   JP06350784A

This patent pertains to a facsimile for LAN as file server- incorporated controller to scan files for presence of virus.

2.   EP 666671 A1

This patent pertains to a system for communicating over a network comprising an anti virus checker.
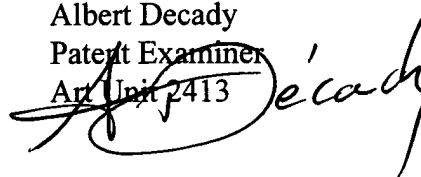
Art Unit: 2413

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Decady whose telephone number is (703) 305-9595. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel, can be reached on (703) 305-9713. The fax phone number for this Group is (703) 305-9724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Albert Decady
Patent Examiner
Art Unit 2413

August 20, 1996